

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

**TRANSLATION**  
**PCT**

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing  
(day/month/year)

Applicant's or agent's file reference  
**000004063PCT**

**FOR FURTHER ACTION**

See paragraph 2 below

International application No.  
**PCT/JP2004/017906**

International filing date (day/month/year)  
**25.11.2004**

Priority date (day/month/year)  
**27.11.2003**

International Patent Classification (IPC) or both national classification and IPC

Applicant

**MERCIAN CORPORATION**

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/JP

Authorized officer

Facsimile No.

Telephone No.

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INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2004/017906

Box No. I	Basis of this opinion
1.	<p>With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.</p> <p><input type="checkbox"/> This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).</p>
2.	<p>With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:</p> <p>a. type of material</p> <p><input checked="" type="checkbox"/> a sequence listing</p> <p><input type="checkbox"/> table(s) related to the sequence listing</p> <p>b. format of material</p> <p><input type="checkbox"/> in written format</p> <p><input checked="" type="checkbox"/> in computer readable form</p> <p>c. time of filing/furnishing</p> <p><input type="checkbox"/> contained in the international application as filed.</p> <p><input checked="" type="checkbox"/> filed together with the international application in computer readable form.</p> <p><input type="checkbox"/> furnished subsequently to this Authority for the purposes of search.</p>
3.	<p><input checked="" type="checkbox"/> In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.</p>
4.	<p>Additional comments:</p>

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Box No. V	Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
<b>1. Statement</b>			
Novelty (N)	Claims	<u>1-16</u>	YES
	Claims	_____	NO
Inventive step (IS)	Claims	<u>12-16</u>	YES
	Claims	<u>1-11</u>	NO
Industrial applicability (IA)	Claims	<u>1-16</u>	YES
	Claims	_____	NO
<b>2. Citations and explanations:</b>			
<p>Document 1: WO, 2003-040370, A1 (Sumitomo Chemical Col, Ltd.), 15 May, 2003 (15.05.03)</p> <p><b>* Claims 1-11</b></p> <p>Document 1 describes a protein having the capability of metabolizing a weed control active compound. This protein is a ferredoxin and has a homology of about 80 – 90% with the base sequences of sequence numbers 1-3 in the sequence table of the present application. Therefore, the DNA that codes, in part of as a whole, a protein having 16-hydroxylase activity or a ferredoxin used in a production wherein a specific macrolide derivative is converted into a 16-hydroxylated macrolide compound could easily be conceived of by an expert in the said technical field in view of the descriptions of said document 1.</p> <p>Consequently, none of the inventions described in claims 1-11 of the present application appear to involve an inventive step in view of the descriptions of the above document 1.</p> <p><b>* Claims 12-16</b></p> <p>The inventions described in claims 12-16 for a production method wherein a specific macrolide derivative is converted into a 16-hydroxylated macrolide compound appears to be novel and to involve an inventive step, even in view of the descriptions of the above document 1 cited in the ISR.</p>			